Universidad Zaragoza

Academic Year/course: 2021/22

26818 - Optical Technology II

Syllabus Information

Academic Year: 2021/22
Subject: 26818 - Optical Technology II
Faculty / School: 100 - Facultad de Ciencias
Degree: 297 - Degree in Optics and Optometry
ECTS: 6.0
Year: 3
Semester: First semester
Subject Type: Compulsory
Module:

1. General information

2. Learning goals

3. Assessment (1st and 2nd call)

4. Methodology, learning tasks, syllabus and resources

4.1. Methodological overview

The methodology followed in this course is oriented towards the achievement of the objectives. The learning process that has been designed for this course is based on the following:

? Participatory lectures in large group and seminars.
? Laboratory practices in a small group but carried out individually or in pairs. These practices will be carried out either in the assembly workshop or in the computer room.
? Exercises and individual questionnaires by Moodle.
? Individualized tutorials or specific guided works

4.2. Learning tasks

This is a 6 ECTS course organized as follows:
? Acquisition of basic knowledge of bifocal and multifocal lenses. (1 ECTS)
? Assembly of lenses in slotted glasses, air and sports glasses with adaptation of the glasses to the physiognomy of the patient (2
? ECTS).
? Knowledge of the market for ophthalmic lenses and management of rate books (0.5 ECTS) Refractive characterization of bifocal and multifocal ophthalmic lenses (0.5 ECTS) Arranging and carrying out an inventory of workshop supplies (0.5 ECTS).
2 of 2
? Resolution of practical cases (0.5 ECTS).
? Contact with professionals in the ophthalmic industry (1 ECTS).

These activities are distributed as follows in the programming of the subject:

LECTURES
Topic 1. Review of monofocal lenses.
Topic 2. Prisms ophthalmic and prismatic effect.
Topic 3. Bifocal lenses.
Topic 4. Progressive lenses.
Topic 5. Adaptation of monofocal lenses

PRACTICE SESSIONS
Practice 1. Put in order. Workshop tools. Monofocal lens assembly review on full rim mounts. Ophthalmic lens rates.
Practice 2. Distance to the vertex, facial and pantoscopic angle. Frame settings. Prismatic effect.
Practice 3. Measurement and centering of bifocal and progressive lens. Reading frames
Practice 4. Bifocal and progressive in slotted glasses. Review of rates.
Practice 5. Practice control.
Practice 6. Assembly glasses in the air.
Practice 7. Assembly glasses Silhouette.Taladro and automatic slot
Practice 8. Review of prismatic effects and problems Mount in Silhouette drill style
Practice 9. General review
Practice 10. Practice control
Practice 11. Practice PRATS
Practice 12. Practice PRATS

4.3. Syllabus

Topic 1. Review of monofocal lenses.
Topic 2. Prisms ophthalmic and prismatic effect.
Topic 3. Bifocal lenses.
Topic 4. Progressive lenses.
Topic 5. Adaptation of monofocal lenses

4.4. Course planning and calendar

1 ECTS. The theoretical part consists of 10 master classes of one hour in which the theoretical foundations necessary for the practices carried out in the laboratory are explained.

5 ECTS. The practical part is divided into 12 sessions of four hours per week in the first semester. Weekly deliveries of exercises via Moodle will be scheduled and must be submitted in the format and time period indicated.

Information available on the web page of the subject, housed in the Virtual Teaching Campus of the University of Zaragoza (http://moodle.unizar.es)

4.5. Bibliography and recommended resources

BB Borish's clinical refraction / editor, William J. Benjamin ; consultant, Irvin M. Borish. - 2nd ed. St. Louis : Butterworth H cop. 2006

BB Brooks, Clifford W.. Essentials of ophthalmic lens finishing / Clifford W. Brooks . - 2nd ed. St. Louis, Missouri : Butter cop. 2003

BB Brooks, Clifford W.. System for ophthalmic dispensing / Clifford W. Brooks, Irvin M. Borish . - 3rd ed. St. Louis : Butte cop. 2007

BB Jalie, Mo. Ophthalmic lenses & dispensing / Mo Jalie. - 2nd ed. Edinburgh : Butterworth-Heinemann, 2003

BB Montés-Micó, Robert. Optometría : principios básicos y aplicación clínica / Robert Montés-Micó Barcelona : Elsevier

BB Tecnología óptica : lentes oftálmicas, diseño y adaptación / Jesús Caum Aregay ... [et al.] . - 1ª ed. Politecnos Barce 2001